

COUNTER Code of Practice

6.0 Logging Usage

Usage data can be generated in a number of ways, and COUNTER does not prescribe which approach should be taken. The two most common approaches are:

- Log file analysis, which reads the log files containing the web server records of all its transactions
- Page tagging, which uses JavaScript on each page to notify a third-party server when a page is rendered by a web browser.

Other options are to leverage Distributed Usage Logging (DUL) to capture content activity that happens on other websites. Each of these approaches has advantages and disadvantages, summarised below.

6.1 Log File Analysis

The main advantages of log file analysis over page tagging are:

- Web servers normally produce log files, so the raw data are already available. No changes to the website are required.
- The data is on the organization's own servers and is in a standard, rather than a proprietary, format. This makes it easy for an organization to switch programs later, use several different programs, and analyse historical data with a new program.
- Log files contain information on visits from search engine spiders. Although these MUST NOT be reported as part of user activity, it is useful information for search engine optimization.
- Log files require no additional DNS lookups. Thus, there are no external server calls which can slow page load speeds or result in uncounted page views.
- The web server reliably records every transaction it makes, including items such as serving PDF documents and content generated by scripts, and does not rely on the visitor's browser.

6.2 Page Tagging

The main advantages of page tagging over log file analysis are:

- Counting is activated by opening the page, not requesting it from the server. If a page is cached it will not be counted by the server. Cached pages can account for a significant proportion of page views.
- Data is gathered via a component (tag) in the page, usually written in JavaScript although Java can also be used. JQuery and AJAX can also be used in conjunction with a server-side scripting language (such as PHP) to manipulate and store it in a database, allowing complete control over how the data is represented.
- The script may have access to additional information on the web client or on the user, not sent in the query.
- Page tagging can report on events that do not involve a request to the web server.
- Page tagging is available to companies who do not have access to their own web servers.
- The page-tagging service manages the process of assigning cookies to visitors; with log file analysis, the server must be configured to do this.
- Recently page tagging has become a standard in web analytics.
- Log file analysis is almost always performed in-house. Page tagging can be done in-house, but is more often provided as a third-party service. The cost differences between these two models can also be a consideration.

6.3 Distributed Usage Logging

Distributed Usage Logging (DUL) is an initiative sponsored by Crossref (see [DUL Working Group](#) for more information) that provides a framework for publishers to capture usage of DOI-identified content items that occurs on other websites, such as aggregators, repositories, and scholarly information-sharing sites. The premise behind DUL is that publishers can register a DUL usage logging end-point with Crossref, which is then mapped to all of the publisher's DOIs. A content site, such as a repository, can use a content item's DOI to look up where the publisher wants a transaction to be logged, then use the standard DUL message structure to log the activity. Using DUL allows a publisher to capture a more complete picture of content usage. The following points cover how DUL may be used with COUNTER statistical reporting:

- DUL is not a replacement for log file analysis or page-tagging approaches. DUL can supplement a publisher's normal usage logging mechanisms, but not replace them.
- DUL-captured usage MUST NOT appear on Standard Views.
- DUL-captured usage may appear on Master Reports.
- DUL-captured usage captured that appears on Master Reports MUST be reported under the platform name where the transaction occurred.
- An organization that supplies usage transactions using DUL MUST include their platform ID with each transaction, and their platform MUST be registered with COUNTER.
- Reporting usage through DUL is OPTIONAL.
- The publisher receiving transactions through DUL is responsible for performing COUNTER processing to eliminate double-clicks, eliminate robot/crawler or other rogue usage, and perform the actions to identify unique items and unique titles.
- Publishers that plan to include usage reported through DUL in their COUNTER Master Reports are responsible for ensuring that DUL-reported usage is included in the audit.